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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/749,724	12/30/2003	Amin M. Godil	D/A3513 XERZ 2 00676	9056
27885	7590	09/15/2005	EXAMINER	
FAY, SHARPE, FAGAN, MINNICH & MCKEE, LLP			MARTIN, LAURA E	
1100 SUPERIOR AVENUE, SEVENTH FLOOR			ART UNIT	PAPER NUMBER
CLEVELAND, OH 44114			2853	

DATE MAILED: 09/15/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/749,724

Applicant(s)

GODIL ET AL.

Examiner

Laura E. Martin

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 30 December 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-6 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-6 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 12/30/2003 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Specification

Applicant is reminded of the proper language and format for an abstract of the disclosure.

The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of 50 to 150 words. It is important that the abstract not exceed 150 words in length since the space provided for the abstract on the computer tape used by the printer is limited. The form and legal phraseology often used in patent claims, such as "means" and "said," should be avoided. The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details.

The language should be clear and concise and should not repeat information given in the title. It should avoid using phrases which can be implied, such as, "The disclosure concerns," "The disclosure defined by this invention," "The disclosure describes," etc.

Drawings

The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they do not include the following reference sign(s) mentioned in the description: 38. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kanemoto et al. (US 5992991) and Jones (US 6719413).

As per claim 1, Kanemoto et al. teaches a ink loader (16 ink tank) configured to hold hot melt ink and wherein ink is associated with a heater (26) for heating the solid ink to a liquid for communication of liquid ink to a printhead (ink tank 16 to printhead 15, C5, L32-34) for document printing, comprising: applying a predetermined amount of power to the heater (AC power to AC heater) for melting the solid ink, wherein the predetermined amount of power will generate a corresponding temperature at the heater when the ink is engaging the heater (AC power turned on if predetermined temperature is less than the actual temperature and turned off if greater than the actual temperature C3, L45+); monitoring the temperature of the heater during the applying (heat control means enables and disables AC power to monitor temperature C3, L38+); and, when the heater is determined to have a temperature higher than the corresponding temperature and indicative of non-engagement between the heater and the ink stick, interrupting the applying of the power (AC power, C3, L41+).

As per claim 2, Kanemoto et al. teaches generating the corresponding temperature to be about 100°C (softening temperature is between 40°C and 140°C C5,

L38-39) and the temperature higher than the corresponding temperature is about 150°C (melting temperature is between 50°C and 150°C C5, L39-40).

As per claim 3, Kanemoto et al. teaches the monitoring device comprising a thermistor at the heater for generating a signal representative of heater temperature (thermistor is used for temperature sensor 132 C10, L66-67).

As per claim 4, Kanemoto et al. teaches an assembly wherein a hot melt ink is heated to a liquid phase for communication to a printhead for document printing, comprising: a tray for holding the solid ink (ink supply channel 16a) and having an open end (open end supplies to printhead) for egress of liquid phase ink during heating; a heater (plate shaped front heater 26) disposed at the open end to contact ink stick (extends to ink supply 16); a power supply for supplying energy to the heater (AC power supply to AC heater C2, L10-11); a control circuit (heat control C3, L38+) for adjusting the supplied energy; and a sensor for sensing a parameter representative of heater temperature wherein the sensor senses the heater temperature to be indicative of non-contact between the ink stick and the heater (if temperature is too high, as determined by heat control means, the AC power is interrupted so as to lower the temperature of the heater C3, L38+), the control circuit interrupts the supply of energy to the heater.

As per claim 5, Kanemoto et al. teaches a sensor comprising a thermistor disposed on the heater and in communication with the control circuit (thermistor in heat control unit used for temperature sensor 132, C10, L66-67).

As per claim 6, Kanemoto et al. teaches a phasing system including a heater plate (26) disposed to engage a hot melt ink and heat an engaging portion of the ink to

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a liquid phase (C1, L22), a temperature sensing device associated with the heater plate for detecting a temperature thereof (temperature detecting means C3, L60) and a control system for selectively supplying power to the heater plate (AC power is turned on or off according to the temperature sensor C3, L38+), the method comprising: supplying a predetermined amount of power (AC power) through the control system (heat control means C3, L38) to the heater plate intended to achieve a desired melt rate of the ink stick during a phase change from solid to liquid, the desired melt rate being associated with a predetermined desired temperature of the heater plate (AC power turned on to melt ink; once a predetermined temperature is reached, the AC power is turned off C3, L38+); sensing the temperature of the heater plate with a sensing device during the supply of power thereto (thermistors 50 in association with heater 26 C7, L41-42) when the sensed temperature of the heater plate varies from the predetermined desired temperature by a selected amount, interrupting the supplied power whereby heater damage and printer ink starvation can be avoided (C3, L38+).

Kanemoto et al. does not teach a means for detecting an ink stick jam, nor does he teach ink sticks.

Jones teaches ink sticks (C1, L31-32) and keyholes (24 A-D), which allow one to physically determine whether there is an ink stick jam.

It would have been obvious at the time of the invention to combine the teachings of Kanemoto et al. with those of Jones because keyholes provide an easy means for providing solid ink to the printer.

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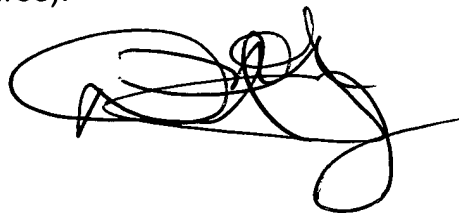
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Laura E. Martin whose telephone number is (571) 272-2160. The examiner can normally be reached on Monday - Friday, 7:00 - 3:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David M. Gray can be reached on (571) 272-2119. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Laura E. Martin



David Gray
Primary Examiner